

Work Order ID 158641

Tuesday, March 28, 2017 1:31:42 PM

158641

Rush
U/R

Page 1

Item ID:	D4842-3	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:	URF 16-692				Stop	*NS2*
Item Name:	Lower Cutter Body, LH					
Start Date:	4/3/2017	Start Qty: 4.00	*4*	Cust Item ID:	F.A.I.R. COMPLETION	
Required Date:	4/10/2017	Req'd Qty: 4.00	*4*	Customer:	REQUIRED	
Reference:	SCHEDULED/C					
Approvals:	Process Plan:	Date: MAR 28 2017	Tooling:	Date:	Run	Start *NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop	*NR2*

Concession 400000661786

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4842	B U/R <i>OK</i> <i>up 17/3/28</i>								
100	BAND SAW	0.00				<i>4</i>	<i>0</i>		<i>DAS</i> 45 <i>173-28</i> <i>9-89</i>
100									
Bandsaw	Memo	0.36							
Jeaspa Bandsaw	Cut Blank at 7.250"								
110	<i>* SEE CONCESSION *</i>	0.00				<i>4</i>	<i>0</i>		<i>DAS</i> 45 <i>173-28</i> <i>9-89</i>
110	HAAS CNC VERTICAL MACHINING #1								
HAAS 1	Memo	2.46							
HAAS CNC vertical machine #1	1-Machine per folio FB192								
	DWG REV: <i>AA</i>								
	FOLIO REV: <i>B</i>								
	2- deburr and break all sharp edges								

★
PTO

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: <u>158641</u> Part No. <u>D4842-3</u> NCR No. _____		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☒ Machining ☒ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date: <u>17/3/28</u>		Step #: <u>110</u>		QTY Effective: <u>4</u>		MRB (QSI042) Approval <u>DAS</u> <u>12</u> <u>9:00</u> <u>17/3/28</u>	
Description Work Order Deviation				Disposition			
Dim 10.9mm ± 0.25 -0.00 is now 10.8mm ± 0.00 -0.20 $(0.425" \pm 0.000 - 0.018)$				Acceptable per Leonardo concession			
				Completed By			
				Lead hand / Supervisor Approval Verification			
				QC / QA Coordinator Approval			

Root Cause			FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	
Design ☒	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☒	
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	
Past Expiry Date ☐	Manufacturing Process ☐	OTHER: _____				
Misidentified ☐	Past Due ☐					

158641

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N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 4/3/2017 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 4/10/2017 **Req'd Qty:** 4.00 ***1***

Customer:

Reference: SCHEDULED/C

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC2- Inspect parts off machine FAI/FAIB	0.00							DAS 4517 9-80
120						4	0		

120

OC

Quality Control

130

130

QC

Quality Control

140

140

Outsource4

Outsource process - Anodize

Memo

Issue P/O to ATG: 35785

1- Black Anodize as per Dwg D4842

2- PRIME AS PER DWG, SEE NOTE #2

Certification of Comformity is required

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Work Order ID 158641

Tuesday, March 28, 2017 1:31:42 PM

158641

Page 3

Item ID: D4842-3 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: URF 16-692 Stop ***NS2***
 Item Name: Lower Cutter Body, LH
 Start Date: 4/3/2017 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 4/10/2017 Req'd Qty: 4.00 ***4*** Customer:
 Reference: SCHEDULED/C

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.00							
Quality Control	3.5 Mi/IS								
180	Identify as per dwg & Stock Location: <u>CCH29</u>	0.00							
180									
Packaging	Memo	0.00							
Packaging	***IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER***								

QC APPROVAL

ONLY

CD 17-04-DS

DAS
9
9-89

APR 05 2017

DAS
6
9-89

POSITIVE RECALL

EFFECTIVE 17-04-05 AUTH 5

RELEASED 9 DATE 17-04-05

9-89

* Concession 400000061786 *

* ARC must be created by QA

* ARC must contain concession Number

* All Parts must be labeled w/concession Number

* FAIR must be completed

5
17/4/13

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
APPROVAL				Completed By 					
				Lead hand / Supervisor Approval Verification 					
				QC / QA Coordinator Approval 					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

158641

Tuesday, March 28, 2017 1:31:42 PM

Approvals:	Process Plan: _____	Date: _____	Tooling: _____	Date: _____	Run	Start	*NR1*
	QC: _____	Date: _____	SPC (Y/N): _____	Date: _____			

[illegible]

DAS
21
9-89 APR 05 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
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Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Tuesday, March 28, 2017 1:31:46 PM

Page 1

Work Order ID: 158641

158641

Parent Item: D4842-3

D4842-3

Parent Item Name: Lower Cutter Body, LH

Start Date: 4/3/2017

Required Date: 4/10/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV: A NEW ISSUE JFS 13/04/30 VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B5.000X1.000		Purchased	No			100	f	6.1250	0.605	2.547368			

M7075T6B5 000X1 000

**

7075-T6 BAR 5.000" X 1.000"

Location

MAT005

M136904

Loc Qty

6.125

6.125

Loc Code

2,548 ft ^{DA} 45 17-3-28
9-RC

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

MS21042L08
LOCKNUT

D4842-3 LOWER
CUTTER BODY LH

D4842-1 LOWER CUTTER DEFLECTOR

NAS1149FN832P WASHER

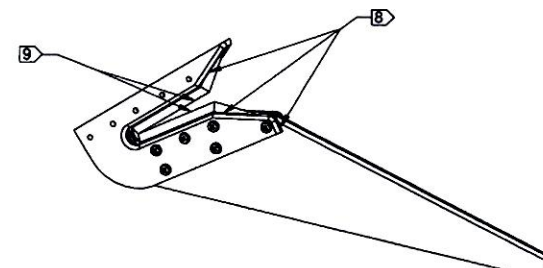
D4839-1 BLADE

MS27039-0819 SCREW

NAS1149FN832P WASHER

D4842-4 LOWER
CUTTER BODY RH

ITEM	QTY -041	P/N	DESCRIPTION
	X	D4842-041	LOWER CUTTER ASSY
1	2	D4839-1	BLADE
2	1	D4842-1	LOWER CUTTER DEFLECTOR
3	1	D4842-3	LOWER CUTTER BODY LH
4	1	D4842-4	LOWER CUTTER BODY RH
5	6	MS21042L08	LOCKNUT
6	6	MS27039-0819	SCREW
7	12	NAS1149FN832P	WASHER
8	A/R	LOCTITE 598	RTV SEALANT



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER NO. 158041
MAR 28 2017

D4842-041 LOWER CUTTER ASSEMBLY

UNDER REVIEW

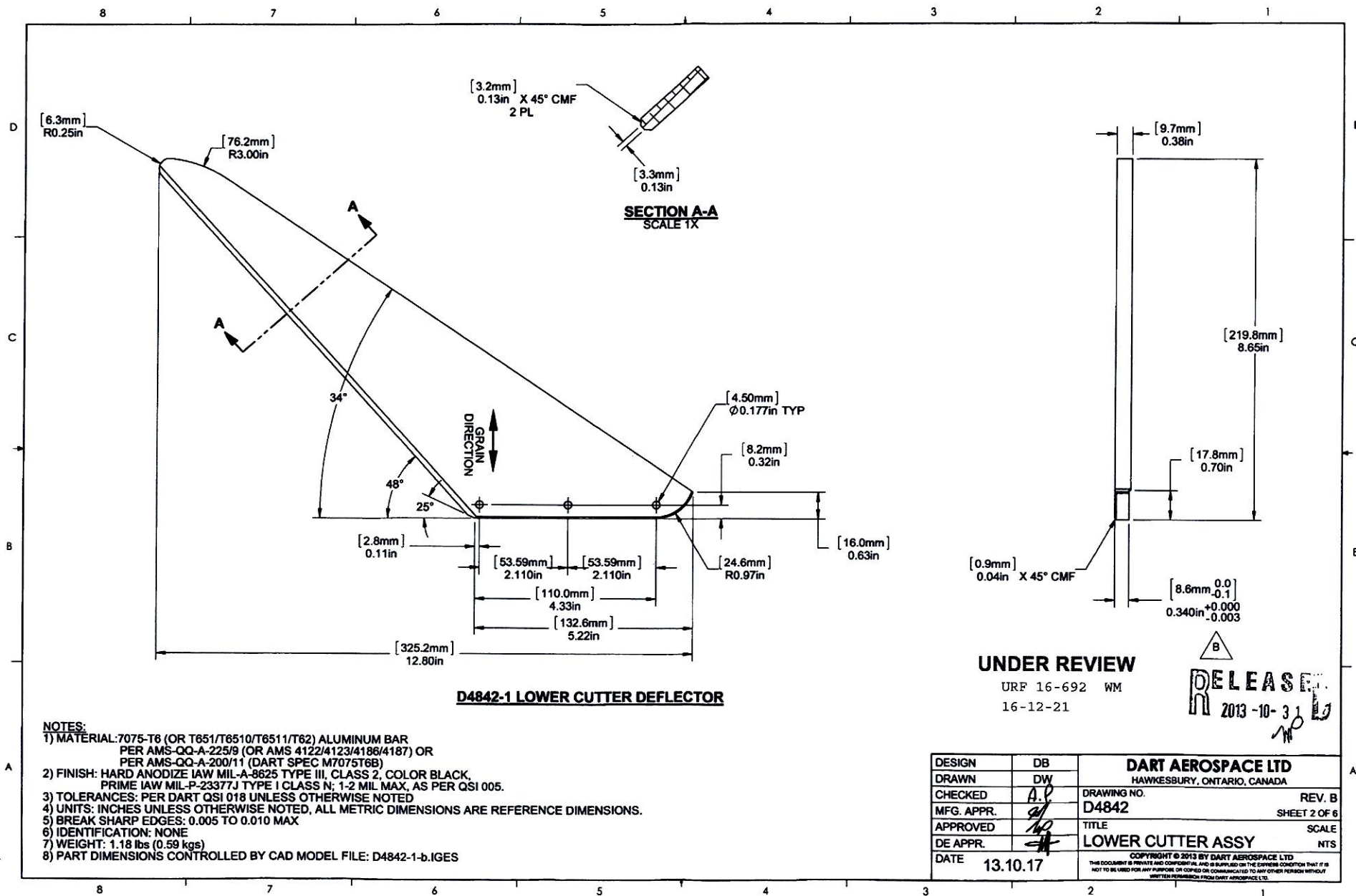
URF 16-692 WM
16-12-21

RELEASED
R 2013-10-31

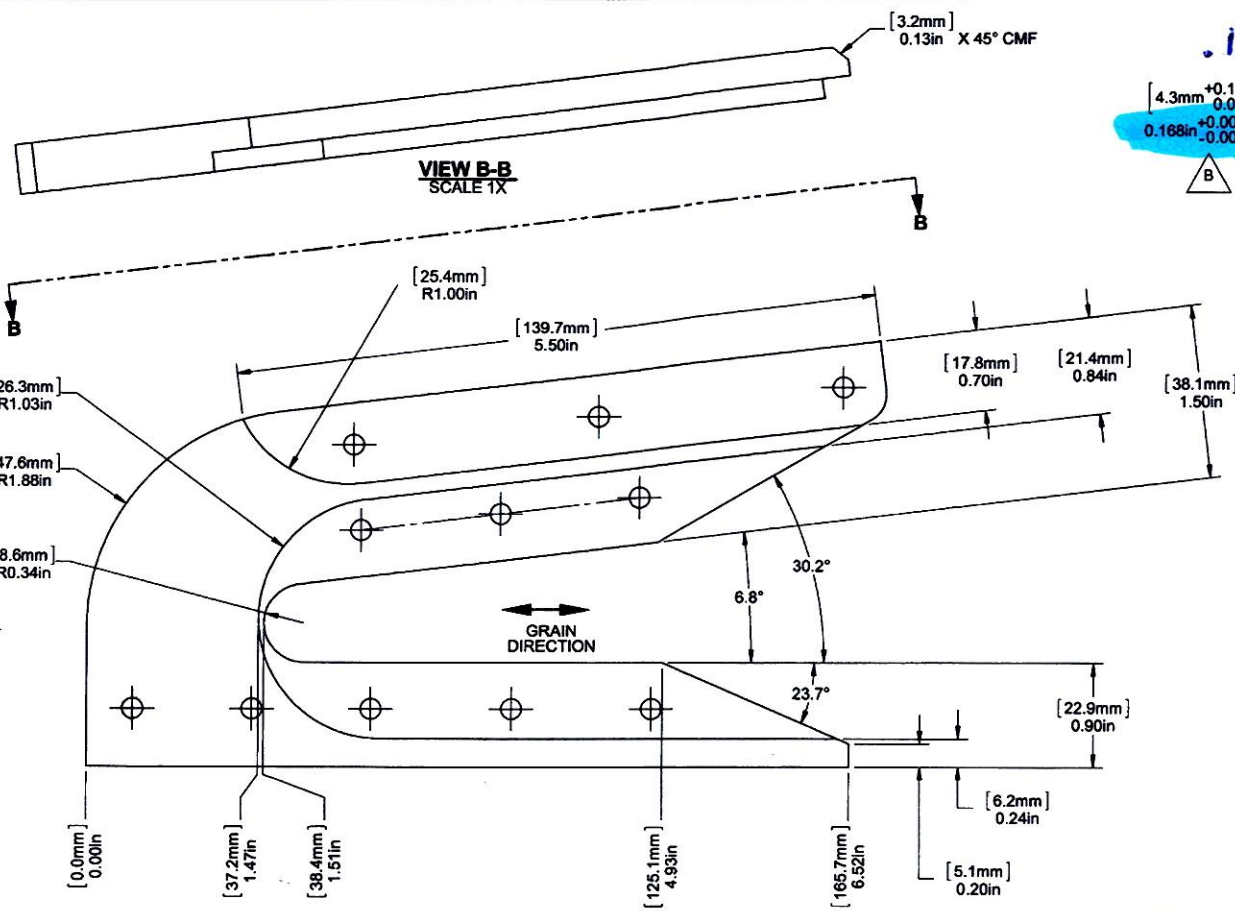
B	CORRECT TOLERANCES (ZN B1-2) (ZN B1-3, D2-3) (ZN B7-5, D7-5)	DW	13.10.17
A	NEW RELEASE	DB	13.05.23
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DW		
CHECKED	A.P.	DRAWING NO.	REV. B
MFG. APPR.	21	D4842	SHEET 1 OF 6
APPROVED	12	TITLE	SCALE
DE APPR.	12	LOWER CUTTER ASSY	NTS
DATE	13.10.17	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: N/A
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4842-041", AGUSTA WESTLAND KIT NUMBER "TBD", REVISION, BATCH NUMBER AND MANUFACTURE DATE, USING AN X-TENSION STAMP, AS PER QSI 044 METHOD 6.2
- 7) WEIGHT: 2.79 lbs (1.26 KGS)
- 8) APPLY RTV SEALANT TO ALL MATING SURFACES UPON ASSEMBLY
- 9) CUTTING EDGE INTENDED TO BE SHARP. DO NOT BREAK SHARP EDGE.



8 7 6 5 4 3 2 1



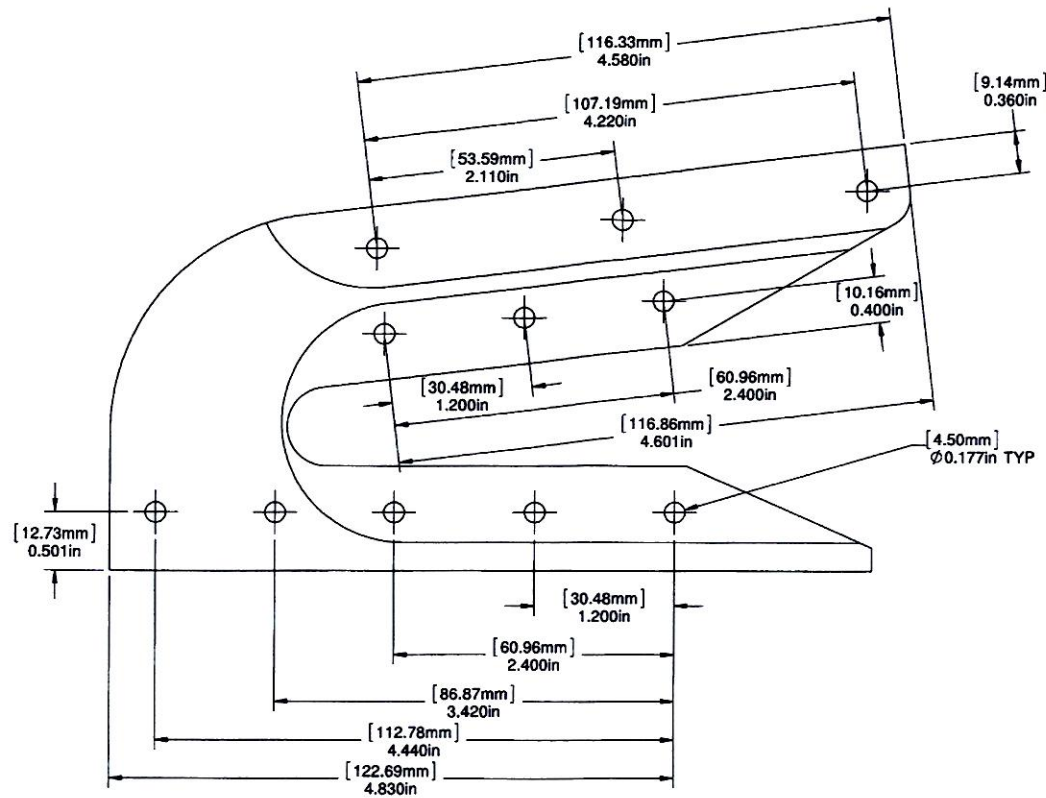
D4842-3 LOWER CUTTER BODY LH

- NOTES:**
- 1) MATERIAL: 7075-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR
PER AMS-QQ-A-225/9 (OR AMS 4122/4123/4186/4187) OR
PER AMS-QQ-A-200/11 (REF DART SPEC M7075T6B)
 - 2) FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK, AS PER QSI 017;
PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX, AS PER QSI 005.
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED, ALL METRIC DIMENSIONS ARE REFERENCE DIMENSIONS.
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.49 lbs (0.22 kgs)
 - 8) PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: D4842-3-b.IGES

UNDER REVIEW **RELEASED**
URF 16-692 WM
16-12-21
2013-10-31

DESIGN	DB	DART AEROSPACE LTD	
DRAWN	DW	HAMMERSBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. B
MFG. APPR.	2/	D4842	SHEET 3 OF 6
APPROVED	1/	TITLE	SCALE
DE APPR.	1/	LOWER CUTTER ASSY	NTS
DATE	13.10.17	COPYRIGHT © 2013 BY DART AEROSPACE LTD	
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8 7 6 5 4 3 2 1



D4842-3 LOWER CUTTER BODY LH
(AUXILIARY VIEW)

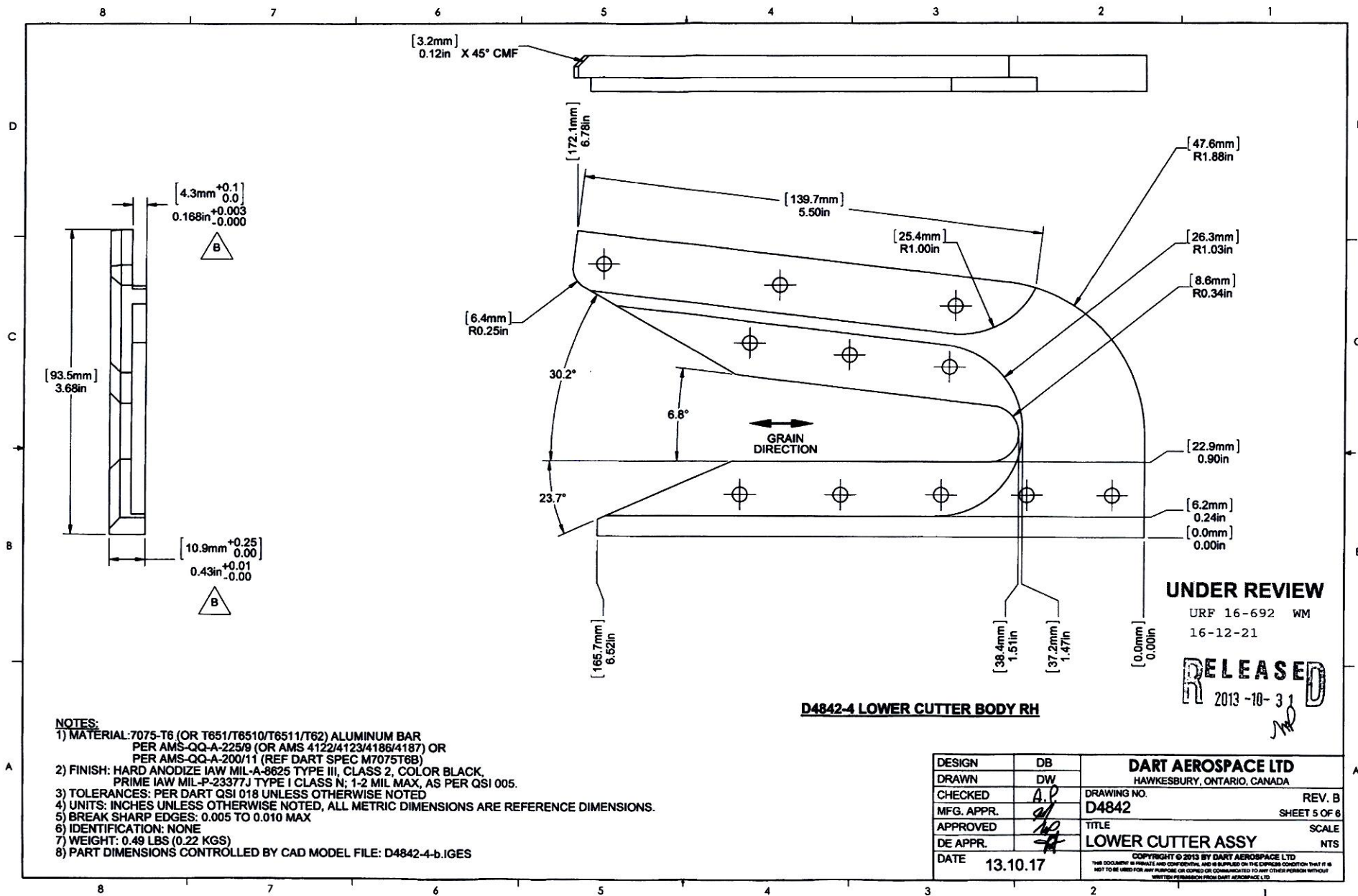
UNDER REVIEW

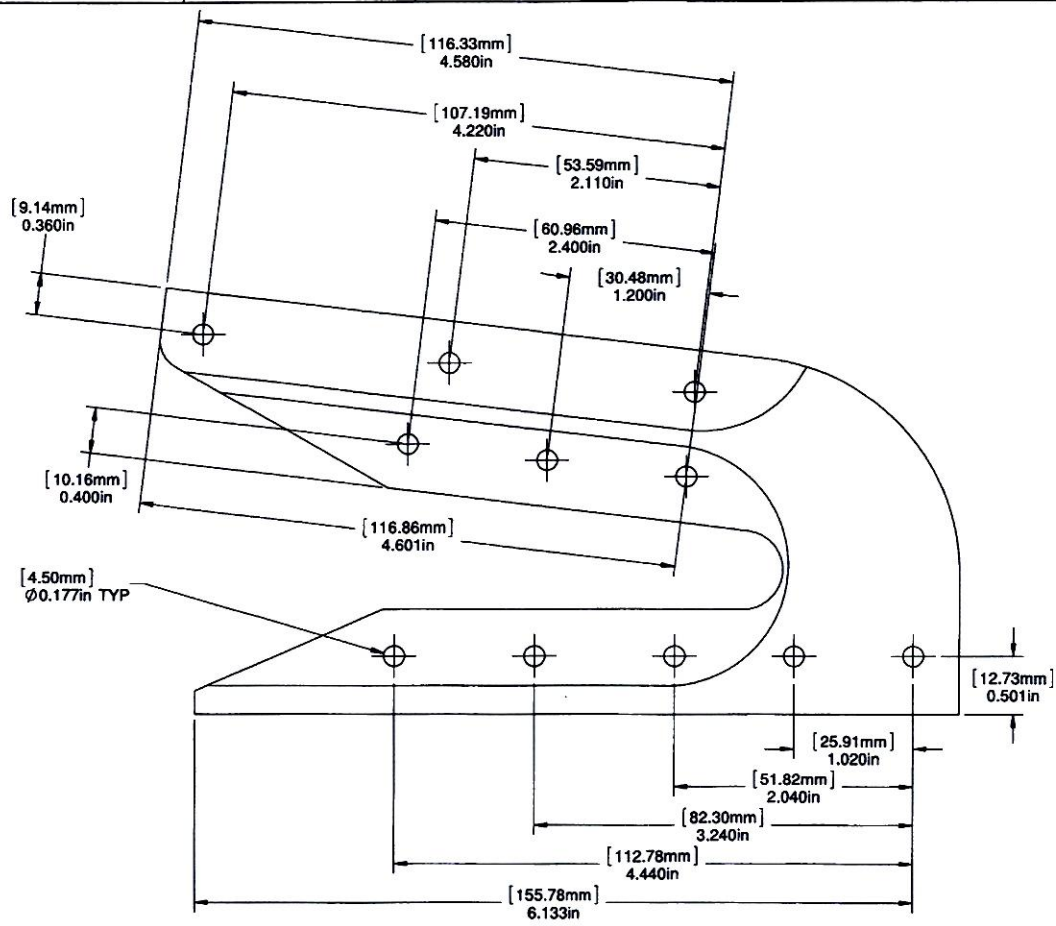
URF 16-692 WM

16-12-21

RELEASE
2013-10-31

DESIGN	DB	DART AEROSPACE LTD	
DRAWN	DW	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. B
MFG. APPR.	SW	D4842	SHEET 4 OF 6
APPROVED	SW	TITLE	SCALE
DE APPR.	SW	LOWER CUTTER ASSY	NTS
DATE	13.10.17	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	





D4842-4 LOWER CUTTER BODY RH
(AUXILIARY VIEW)

UNDER REVIEW

URF 16-692 WM
16-12-21

RELEASE
2013-10-31

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DW		
CHECKED	A.P.	DRAWING NO. D4842	REV. B
MFG. APPR.			SHEET 6 OF 6
APPROVED		TITLE	SCALE
DE APPR.		LOWER CUTTER ASSY	NTS
DATE	13.10.17	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

PRINTING DATE AND STATUS 14.02.2017 Assigned to QC repair result

Supplier NC N.	AWC 006/01	Date	02.02.2017	AW	400000061786	Purchase Order	4801373666
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DEFECT 0001**FO01****Wrong dimensions**

attachment

Manuf. Doc. N.	AWC 006	Date		AW Doc. N.		Purchase Order	4800671131 4800722284 4801147764 4801186922 4801218851 4801288960 4801373666								
AW P/N	6F9540V00231	S/N / Batch Number	B109195 Qty. (1) B133355 Qty. (2) B134314 Qty. (1) B134315 Qty. (1) B134842 Qty. (1) B137492 Qty. (1) B137355 Qty. (2) B137816 Qty. (1) B137818 Qty. (1) B137817 Qty. (1) B140379 Qty. (3) B140381 Qty. (2) B147002 Qty. (2) B150786 Qty. (1)	Grade	A	AW Drawing Issue	B								
Description	Lower Cutter Assy			Batch Qty	20	Defective Qty	20								
Manufacturer	Dart Aerospace			Model	AW169										
Defect(s) Description															
Leonardo has informed Dart that there are interference issues installing the lower cable cutter D4842-041 onto the Leonardo interface bracket. <table border="1"> <thead> <tr> <th>Department</th> <th>Inspector</th> <th>Signature</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Quality</td> <td>DAS 16 9-89</td> <td></td> <td>2017/02/01</td> </tr> </tbody> </table>								Department	Inspector	Signature	Date	Quality	DAS 16 9-89		2017/02/01
Department	Inspector	Signature	Date												
Quality	DAS 16 9-89		2017/02/01												
Defect(s) Cause															
The Lower Cutter body has a dimension of 10.9 +0.25/-0.00 mm. This dimension was reported as part of the approved FAI and has been met with all delivered product. <table border="1"> <thead> <tr> <th>Department</th> <th>Inspector</th> <th>Signature</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Quality</td> <td>DAS 16 9-89</td> <td></td> <td>2017/02/01</td> </tr> </tbody> </table>								Department	Inspector	Signature	Date	Quality	DAS 16 9-89		2017/02/01
Department	Inspector	Signature	Date												
Quality	DAS 16 9-89		2017/02/01												
Corrective Action						Complete Before									
In order to mitigate the interference issue for Leonardo, Dart is proposing to remove sufficient material to make the overall installation dimension at 22.15 mm +0.05/-0.35. <table border="1"> <thead> <tr> <th>Department</th> <th>Inspector</th> <th>Signature</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Quality</td> <td>DAS 16 9-89</td> <td></td> <td>2017/02/01</td> </tr> </tbody> </table>								Department	Inspector	Signature	Date	Quality	DAS 16 9-89		2017/02/01
Department	Inspector	Signature	Date												
Quality	DAS 16 9-89		2017/02/01												

For "MANUFACTURER" SUPPLIERS ONLY
ENGINEERING evaluation and proposal

Engineering evaluation

 Investigation report n.....
 Compliance report n.....

Dart's position is that this change will not impact the structural substantiation presented in Report DA169-4 for the lower cutter body since this is not a section with the lowest margin. Therefore removing 0.3 mm max from each part will not impact the structural integrity of the lower cutter assembly. The dimension on the cutter body part D4842-3/-4 will be 10.80 +0.00/-0.200.

The dimension change of the two lower cutter body parts mating, plus the sealant, anodize and primer layers will be defined as a dimension of 22.15 +0.05/-0.35 mm on the assembled lower cutterbody and will be incorporated into the D4842 drawing for inspection.

	Defect effects		Limitations
	Before any repair	After any repair	
	☐ yes	☐ yes ☐ no	☐ yes (specify) ☒ no
Safety	☐ yes	☐ yes ☐ no	
Life	☐ yes	☐ yes ☐ no	
Strength	☐ yes	☐ yes ☐ no	
Performances	☐ yes	☐ yes ☐ no	
Interchangeability	☐ yes	☐ yes ☐ no	
Reliability	☐ yes	☐ yes ☐ no	
Maintainability	☐ yes	☐ yes ☐ no	
Installability	☒ yes	☐ yes ☒ no	
Testability	☐ yes	☐ yes ☐ no	
Only aspect	☐ yes	☐ yes ☐ no	
Repair Proposal		Decision to use	
None		☐ Use repaired with specific repair	
		☐ Use repaired with known repair	
		☐ Use as is	
		☐ Use repaired for tests (see Limitations)	
		☐ Use as is for tests (see Limitations)	
		☒ Scrap	
Concession Classification		Submit after repair	
☒ Major ☐ Minor		☐ yes ☐ no	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO35785**

Purchase Order Date 3/29/2017

PO Print Date 4/4/2017

Page Number 1 of 2

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
	Line Comments		Promise Date				
	Delivery Comments						
	158641	D4842-3 LOWER CUTTER REV. B	4/4/2017		4.00	\$45.00	\$180.00
			Yes				
			4/4/2017				
		FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N					
						Line Total:	\$180.00
2	158640	D4842-4 LOWER CUTTER REV. B	4/4/2017		4.00	\$45.00	\$180.00
			Yes				
			4/4/2017				
		FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N					
						Line Total:	\$180.00

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

4/4/2017



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913142

Date: 04-Apr-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Quantity	Description	Ship Via
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.	
4 ea	Part: D4842-3 ✓ Lower Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20878 PO: PO35785	Rev: B Line: 1
4 ea	Part: D4842-4 Lower Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20879 PO: PO35785	Rev: B Line: 2
1 ea	Part: ADMINISTRATION FEE Administrative Fee Job: 20880 PO: PO35785	Rev: N/A Line: 4
DATE: 4/4/17 CERTIFIED SIGNATURE: RECEIVER SIGNATURE: _____ Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt. CERTIFICATE OF CONFORMANCE A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO REQUIREMENTS. MADE IN CANADA.		